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CENTRAL INTELLIGENCE AGENCY REPORT NO. [redacted]

INFORMATION REPORT

CD NO

COUNTRY East Germany

DATE DISTR. 9 November 1953

SUBJECT Production of "Parlanat" of Arzneimittelwerk Dresden

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PLACE ACQUIRED [redacted]

NO. OF ENCLS. (LISTED BELOW)

DATE OF INFO

SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

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1. "Parlanat AWD", which contains glycosides A, B, and C of Digitalis lanata, is a preparation marketed by VEB Arzneimittelwerk-Dresden. It is supplied in 20-tablet vials, containing 0.1 mg. of total glycosides per tablet. Each vial costs 1.50 DM (East). Packages containing up to 500 tablets are supplied to institutions upon request.

2. The procedure employed in the production of "Parlanat" was developed by the research laboratory of the AWD. Development of a method for the production of this drug was given a high priority by the organization, even though the work was not fundamental research.

3. In the process employed, the raw drug was treated as follows:

a. Seventy-five kilograms of folia Digitalis lanata were milled to a coarse consistency and mixed by hand with 18.75 kilograms of sodium chloride. The mixing was continued further in a mixing machine producing a powder with particle size equal to "Sieve 1."

b. Forty-five kilograms of water and 37.5 kilograms of chopped straw were added to the salt-crude drug mixture. Care had to be taken to insure a homogenous mixture. The addition of the water and chopped straw was carried out in a room with excellent ventilation fans as the procedure raised considerable amounts of the material in dust form. Straw was used rather than oat hulls to prevent the loss of chloroform after the extraction process described in the next operation.

c. The mixture was placed in a 1000-liter vessel and 600-700 kilograms of chloroform were poured over it so that the mixture was completely covered. The material was allowed to stand for three days in a cold room. Chloroform was added after the first and second day to replace that which had evaporated. After the third day the chloroform was removed by filtration. The vessel was filled with 300-400 kilograms of fresh chloroform and the mixture was allowed to stand for another two days.

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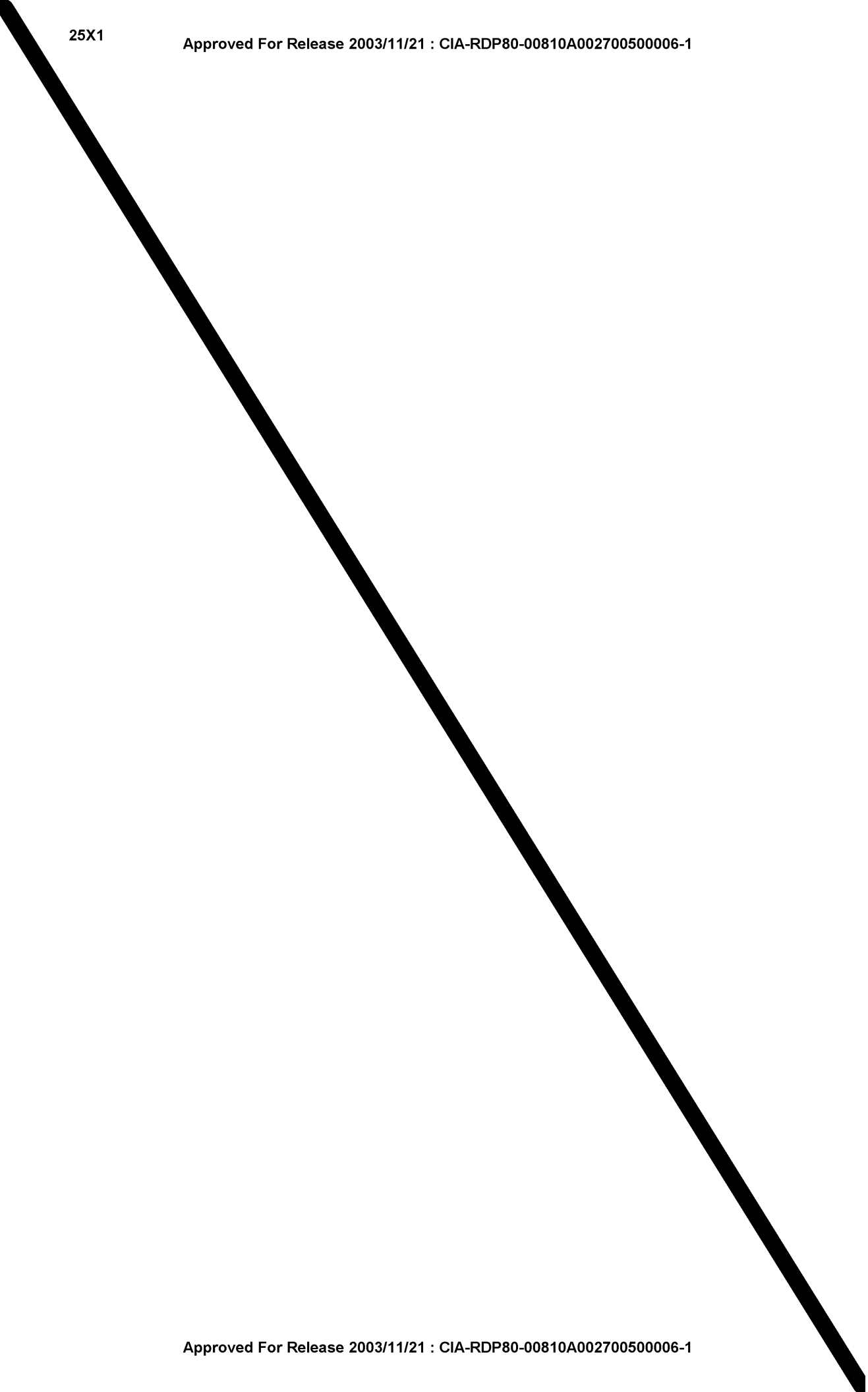

d. The chloroform extract was distilled off under vacuum at a temperature not exceeding 40°C. The residue, a dark green oily material, was treated with 8-10 kilograms of absolute ether, prepared by drying the ether over calcium chloride and sodium wire. The addition of ether usually produced a light green, powdery precipitate which was carefully washed with ether. Ether was added gradually until the product was sufficiently powdery to permit filtration. After filtration the product was dried in a vacuum desiccator. During this procedure care had to be taken to avoid poisoning from the dried powder in dust form. The yield obtained was about 250 grams of "Panlanat"-material with an approximate content of 20 percent total glycosides. Ether and chloroform used in the process were recovered by redistillation.

e. The crude glycoside mixture was further purified to obtain a "Panlanat"-material with 30 percent total glycosides. This higher percentage of purity was desirable because the specificity of the "Panlanat" depended not only on the glycosides but also on the non-glycoside content since both fractions had physiological activity. Further purification was carried out by several precipitations of the material from chloroform solution by the addition of ether, and with aluminum-amalgam. The Keiljet Test was used to control the purity of the preparation. The test consists of the treatment of the digitalis glycosides with alkaline picric acid. This produces a color effect which conforms to the Beers-Lambert Law.

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